

Appln No. 10/603,460
Amdt date March 31, 2006
Reply to Office action of December 1, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 - 28. (Canceled).

29. (New) A method for compiling operational activity data of a vehicle, comprising:
providing a computing system, the computing system having:
 a sensor system for detecting operational activity of the vehicle,
 a dynamic ram memory coupled to the sensor system for storing detected
operational activity data;
 a solid state persistent storage device coupled to the dynamic ram memory, and
 a processor for controlling the sensor system, the dynamic ram memory and the
solid state persistent storage device,
establishing criteria for an operational activity to be a triggering event;
upon the processor determining that the sensor system has detected a triggering event, the
processor controlling data transfer from the dynamic ram memory to the solid state persistent
storage device of data detected during a predetermined time spanning before and after the
triggering event.

30. (New) The method of Claim 29, wherein the sensor system detects vehicular
motion.

31. (New) The method of Claim 30, wherein the triggering event is selected from
vehicular acceleration, vehicular deceleration, or vehicular vertical or horizontal motion.

Appln No. 10/603,460

Am dt date March 31, 2006

Reply to Office action of December 1, 2005

32. (New) The method of Claim 29, wherein the sensor system provides motion data based upon movement of a metal ball over an X - Y positional resistive array.

33. (New) The method of Claim 29, further comprising, upon the sensor system detecting a triggering event:

compressing data stored in the dynamic ram into compressed data in response to the triggering event, the compressed data corresponding to data stored in the dynamic ram memory for the predetermined time interval; and

transferring the compressed data to the solid state persistent storage device.

34. (New) The method of Claim 29, wherein the solid state persistent storage device is a Flash memory.

35. (New) A vehicle safety communication device comprising:

a receiver circuit for receiving global positioning signals provided by a global positioning transmitter;

sensors for receiving sound and visual data;

a motion detector for generating a trigger signal in response to detection of a significant event, a significant event being a sudden change in vehicle speed or vehicle orientation in the three-dimensional space;

a dynamic ram memory for storing the sound and visual data received and motion data detected by the motion detector;

a data compression circuit for compressing the sound and visual data and the motion data stored in the dynamic ram into compressed sound/visual/motion data in response to the trigger signal, the compressed sound/visual/motion data corresponding to a time interval centered about a time of occurrence of the significant event;

a solid state persistent storage device adapted for storing the compressed sound/visual/motion data;

Appln No. 10/603,460

Amdt date March 31, 2006

Reply to Office action of December 1, 2005

a real-time clock for providing time of the significant event;

a central processing unit coupled to and controlling operations of the receiver circuit, the sensors, the dynamic ram memory, the motion detector, the data compression circuit, the persistent storage device, and the real-time clock; and

a battery for supplying power to the receiver circuit, the sensors, the dynamic ram memory, the motion detector; the data compression circuit, the solid state persistent storage device, the clock, and the central processing unit,

wherein the receiver circuit, the sensors, the dynamic ram memory, the motion detector; the data compression circuit, the solid state persistent storage device, the clock, and the central processing unit are implemented in a system on chip format on one single electronic chip, and

wherein the solid state persistent storage device stores compressed sound and visual data and motion data occurring within a time interval centered about a time of generation of the trigger signal.

36. (New) The vehicle safety communication device of claim 35,

wherein the receiver circuit is coupled to a planar antenna,

wherein the sensors include charge coupled devices or complementary metal oxide semiconductor devices and a USB interface,

wherein the solid state persistent storage device is Flash memory,

wherein the battery is Lithium-ion battery,

wherein the data compression circuit uses JPEG or MPEG compression format; and

wherein the central processing unit is RISC based.

37. (New) The vehicle safety communication device of claim 36, wherein the central processing unit includes:

a plurality of UART serial control ports,

a plurality of USB device control ports;

a plurality of USB host control ports;

an Ethernet network port; and

Appln No. 10/603,460

Amdt date March 31, 2006

Reply to Office action of December 1, 2005

DRAM and Flash Memory controllers,
wherein the central processing unit executes software for controlling the device.

38. (New) The vehicle safety communication device of claim 35, wherein the receiver circuit for receiving global positioning signals includes a planar antenna.

39. (New) The vehicle safety communication device of claim 35, further comprising:
a digital signal processing module for the receiver circuit;
a digital signal processing module for the wireless communication circuit; and
a digital camera pixel bus for the data compression circuit.

40. (New) The vehicle safety communication device of claim 35, further comprising a wireless communication circuit for transmitting the sound and visual data and the motion data, the wireless communication circuit including a planar antenna and a USB interface.

41. (New) The vehicle safety communication device of claim 40, wherein the wireless communication module is selected from a group consisting of GMS, CDMA, 802.11, MURS, FRS, GMRS, HAM, and CB radio communication.

42. (New) The vehicle safety communication device of claim 40, wherein the wireless communication module is adapted to be used as a radio beacon for car theft alarm, emergency help beacon, receiving internet data communication signals that include data/voice/video information, earthquake alarm, tornado alarm, enemy attack alarm and wireless broadband communication terminal to a PC, notebook PC or PDA.

43. (New) The vehicle safety communication device of claim 40, wherein the wireless communication module is coupled to an antenna selected from a group consisting of a printed circuit trace (FR4) antenna and a ceramic chip antenna or a PIFA.

Appln No. 10/603,460

Amdt date March 31, 2006

Reply to Office action of December 1, 2005

44. (New) The vehicle safety communication device of claim 35, wherein the receiver circuit is coupled to the planar antenna selected from a group consisting of a printed circuit trace (FR4) antenna and a ceramic chip antenna or a PIFA.

45. (New) The vehicle safety communication device of claim 36, wherein the Flash memory is selected from the group consisting of Smart Media Card, Compact Flash Card, Secure Digital Card, Multi-Media Card, and plan Flash memory IC.

46. (New) The vehicle safety communication device of claim 35, further comprising a contact or a contactless smart card reader for using as an anti-theft second key.

47. (New) The vehicle safety communication device of claim 36, wherein the visual/sound/motion data is transferred from DRAM to Flash memory when the Lithium-ion battery is turned on.